NM1 - 3

MONITORING REPORTS

YEAR(S):

1998 EPA INSPECT

Inspection Report
Parabo Disposal Facility. (Waypoint #45)
Lea County, NM

Inspection Date: November 3, 1998

EPA ID Number: none

Facility Name: Sundance Services Inc., Parabo Disposal Facility

Physical Location: N 32° 26.967', W 103° 05.004'
3 miles east of Eunice
Section 29, Township 21S, Range 38E

Mailing Address: P.O. Box 1737
Eunice, NM 88231

Type of Ownership: private

Inspection Participants:

Lead EPA Inspector: Melissa Smith (214) 665-7357 **Initials:** MLS

Other Participants:

Roger Anderson	New Mexico Oil Conservation Division	(505) 827-7152
Doug McKenna	U.S. Fish and Wildlife Service	(505) 589-2823
Greg Stover	U.S. Fish and Wildlife Service	(505) 883-7828
Vince Balderaz	U.S. Bureau of Land Management	(505) 393-3612
Ed Moriarty	Science Applications International Corporation (SAIC)	(703) 645-6973
Tim Reeves	SAIC	(303) 382-6730

Facility Owner: Sundance Services, Inc.

Facility Representatives: Michael Patterson, Operations Manager (505) 394-3480
Donna Roach, Office Manager/President (505) 394-3480
Kelly Roach, Plant Manager (505) 394-3480

Facility Description: Commercial facility for oil field waste disposal.

Generator Status: non-generator

Inspection Type: Compliance evaluation inspection with sampling

Reason for Evaluation: General inspection with sampling

Summary of Inspection: see narrative

Checklists Completed: none

Peer Reviewed by: Linda Hutchison **Date:** 6/24/99

Compliance Evaluation Inspection Narrative
Parabo Disposal Facility (Waypoint #45)
Lea County, NM

Introduction

On September 17, 1998, the Sundance Services Inc. Parabo Disposal Facility ("Parabo") was identified during an aerial survey by the U.S. Fish and Wildlife Service (FWS) as being a potential problem oil pit facility. From the air, it appeared that the facility had numerous pits with oil on the surface that were not netted. A site inspection was conducted on November 4, 1998, as a follow-up to the aerial survey. The inspection team arrived at the facility at approximately 8:30 am. The team was met by Mr. Kelly Roach, Plant Manager; Mr. Michael Patterson, Operations Manager; and Ms. Donna Roach, Office Manager and President. The team explained the purpose of the visit which was to follow-up on the information obtained during the aerial survey, determine if any pits or structures pose a threat to human health or the environment (including wildlife), and to determine if the facility handles any waste which may be subject to the Resource Conservation Recovery Act regulations regarding hazardous waste management.

Background

The Parabo facility is located on the Texas-New Mexico border three miles east of Eunice, New Mexico. The facility has been in operation since 1978. The facility accepts and processes RCRA-exempt oil field wastes (wastes associated with the exploration , development, or production of crude oil, natural gas or geothermal energy). These wastes include produced water, basic sediment and water (BS&W), tank bottoms, oil contaminated soils, drill cuttings, and certain cement and muds. The facility also accepts non-hazardous, non-exempt waste. According to facility representatives, waste is considered exempt if it comes from a production lease, and non-exempt if it is received from a service company. Examples of non-exempt waste sometimes received are sump material or car wash waste. Laboratory analyses are conducted by the generator for non-exempt waste and results are submitted to the facility which then submits it to the New Mexico Oil Conservation Division ("NMOCD") for approval. Attachment A contains examples of documents required for waste acceptance. Attachment B contains information on sample analyses and types of waste. Both exempt and non-exempt waste go through the same treatment process. The facility operates under permit #R5516 and Rule 711 permit #NM-01-0003 issued by the NMOCD. A copy of the permit is included in the facility brochure in Attachment C.

Operations at the facility include treating sludges to recover oil and disposing of solids in disposal pits. Produced water is placed in treatment tanks (see Attachment D, photo # 1), the oil and water is separated, the oil is sold as product (see Attachment D, photo # 2), and the water is disposed of in on-site evaporation pits. According to facility representatives, the evaporation pits are not intentionally used for separation of oil and water; however, malfunctions have occurred that have resulted in oil entering the evaporation pits. BS&W waste is placed in tanks, heated, run through a centrifuge (the centrifuge was out of operation at the time of the inspection), and solids are separated out and placed in disposal pits. Contaminated soil is placed onto a pile and will be used to backfill pits that are cleaned out. Treatment tanks are surrounded by an earthen berm for secondary containment. On the other side of the berm is a rock mining facility (see Attachment D, photo # 3). The facility pits consist of 8 disposal and evaporation pits (see Attachment E, facility diagrams). The pits were formed by a gravel mining plant previously located at the site. The pits are not lined because according to facility personnel they are located on non-permeable, Triassic red bed clay. Three of these pits are considered to be "problem pits" by the facility and are currently in the process of being cleaned up (Pit #'s 1, 4, & 5). They are considered problem pits due to oil that has accumulated in the pits. The pits are described in more detail below.

During a site tour of the facility, the inspection team observed each of the pits. Due to cold outdoor temperatures at the time of the inspection, oil on the surface of the pits was solidified; therefore, the team was unable to determine the actual depth of the oil. The dimensions of the pits were obtained from a table provided by the facility representatives (Attachment F, table of pit dimensions). Following are summaries of the conditions of each pit at the time of the inspection:

Pit #1: Approximately 7.5 acres in diameter and 5 feet deep. The pit is used as an evaporation pit to dispose of produced water. At the time of the inspection, the pit contained oil due to an accident involving one of the tanks. The pit was being drained, and according to facility personnel, the oil will be dredged up and the pit will be used again for evaporation of produced water. Oil could be seen on the surface of the water and on the banks of the pit. The pit did not contain any exclusionary devices such as netting (see Attachment D, photo #'s 6 & 7).

Pit #2: Approximately 2 acres in diameter and 5 feet deep. The pit is used as an evaporation pit to dispose of produced water. The pit did not appear to contain oil at the time of the inspection. There was no evidence of oil staining on the banks of the pit (see Attachment D, photo # 19).

Pit #3: Approximately 2 acres in diameter and 5 feet deep. The pit is used as an evaporation pit to dispose of produced water. The liquid in the pit appeared to be a greenish, milky color. There did not appear to be any oil in the pit at the time of the inspection. There was no evidence of oil staining on the banks of the pit (see Attachment D, photo # 18).

Pit #4: Approximately 3 acres in diameter and, according to facility personnel, between 55 and 80 feet deep. The pit was used for disposal of BS&W waste. The pit is currently inactive. The facility representative stated that the pit will be cleaned up and closed eventually. The contents of the pit will be removed and processed through the treatment tanks. At the time of the inspection the pit was completely covered with a thick layer of oil. The soil around the pit and the banks of the pit were stained with oil. The pit did not contain any exclusionary devices such as netting (see Attachment D, photo #'s 4 & 5).

Pit #5: Approximately 5 acres in diameter and 6 feet deep. The pit is used as an evaporation pit to dispose of produced water. The pit was approximately 75% covered with oil due to a malfunction in adjoining skimming pits. The skimming pits were covered with netting; however, the main body of the pit was not (see Attachment D, photo # 8). According to facility representatives, the oil is eventually going to be skimmed off of the pit.

Pit #6: Approximately 16 acres in diameter and 5 feet deep. The pit is used as an evaporation pit to dispose of produced water. The pit is also an equalization pit for pit #5. The pit did not appear to contain oil at the time of the inspection. There was no evidence of oil staining on the banks of the pit (see Attachment D, photo # 9).

Pit #7: Approximately 1 acre in diameter and 20 feet deep. The north side of the pit is being used as a "jet-out" facility for the accumulation and disposal of the heels from truck wash-out operations. This portion of the pit was completely covered with a thick layer of oil. Animal tracks were observed on the surface of the oil. The contents of the "jet-out" pit flows (via gravity) from the initial pit into a series of cells that make up the remainder of Pit #7. The liquid collected in the final cell is transferred to Pit #3 for evaporation. All portions (cells) of the pit were heavily covered with oil. There was no netting or other exclusionary devices present over the pit (see Attachment D, photo #'s 11, 16, & 17). According to facility representatives, the contents of the pit will eventually be dried and incorporated within the solids pile. A recovery and monitoring system was installed and monitoring wells are located around the pit due a leak from the pit off the west side of the facility property (see Attachment D, photo # 15).

Pit #8: Dimensions unknown. Pit used for disposal of solids. Solids will be dried and incorporated within the solids pile to be used as fill and then covered with top soil. Cattle, deer, and other animal tracks were observed in and around the pit (see Attachment D, photo #'s 12-14). Oil was observed on the surface of the pit. A flagging device was observed over a portion of the pit to act as a deterrent to wildlife; however, it appeared to have been partially submerged in the pit.

According to facility representatives, only three pits (Pits 1; 5, & 6) will be kept in operation for use as evaporation pits. Pits 7 & 8 will be closed. Pits 2 & 3 will be combined and used for land farming. Pit 4 will be closed eventually; however, due to the size and depth of the pit, facility representatives indicated that it will take a long time to process the waste in the pit and close it out. Closed pits will be back filled with clean soil. Eventually, the facility's goal is to not use any pits but to use a buried tank system for skimming oil.

Representative samples were collected from the treatment tanks and several of the pits. The following samples were collected:

- Pit #4: A liquid sample was collected from a steel container adjacent to the pit. According to facility representatives, the contents of the pit was the same as the contents of the container. The sample was collected from a pipe leading from the container to the pit (sample # WP-45-PIT4-1). Representative samples were collected of the sediment around the edge of the pit (WP-45-PIT4-2 and WP-45-PIT4-3). A field blank sample was collected at this location for quality control purposes (WP-45-FB). A duplicate sample was collected of the sediment for quality control purposes (WP-45-PIT4-4).

- Pit #5: A liquid sample was collected from the discharge pipe leading from the skim pit to the main body of the pit (WP-45-PIT5-1). Representative samples were collected of the sediment around the edge of the pit. One of the samples was collected from the east side of the pit that was not influenced by wind direction at the time of the inspection thus resulting in less oil contamination (WP-45-PIT5-2). The other sample was collected from the west side of the pit that was heavily contaminated with oil (WP-45-PIT5-3). Duplicate samples were not collected at this location.

- Pit #7: A liquid sample was collected from a pump valve in the final cell of the pit (WP-45-PIT7-1). Two sediment samples were collected. One sample was collected from the sediment beneath the flow from the initial "jet-out" pit into the first cell (WP-45-PIT7-2). The other sample was collected from the sediment at the edge of the initial pit (WP-45-PIT7-3).

Appropriate quality assurance and quality control (QA/QC) samples were collected for the site. The facility was offered the opportunity to have additional sample volumes collected in order to have their own analyses conducted. Mr. Patterson declined the offer for samples. The samples collected were sent via Federal Express to Core Lab-Gulf States Analytical in Houston, Texas, for analysis (see Attachment G, chain of custody form). The samples were analyzed for volatile organic compounds, semi-volatile organic compounds, organochlorine pesticides, organophosphorus pesticides, chlorophenoxy herbicides, polychlorinated biphenols (PCBs), and HSL metals (Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, and Zinc). A summary of the analytical results is included as Attachment H.

The inspection team also observed a container storage area. The storage area was equipped with secondary containment. Approximately 30 drums were present in the storage area (see Attachment D, photo # 10). A visual survey of the drums revealed that the majority were empty. Facility representatives explained that the drums had been used to transport drill cuttings from a monitoring well installation project in Hobbs, New Mexico. The contents of the drums were placed in the facility's contaminated soil pile. The drums that were not empty (blue poly-drums) contained product materials, according to the facility representative.

Areas of Concern

- The same site conditions (i.e. oil on the surface of the pits) were observed during a similar inspection conducted in September, 1997, by EPA, FWS, and NMOCD.
- A dead migratory bird, a Bufflehead duck, was recovered by the FWS from Pond #3.
- Several pits are heavily covered with oil and there is insufficient migratory bird deterrent present at the pits.
- Numerous livestock and wildlife tracks were observed in and around the pits due to insufficient fencing around the facility and/or pits.
- The pits and surrounding soil are heavily saturated with oil and are not lined.

Attachments

A Waste Acceptance Documentation

B Analytical requirements for non-exempt waste

C Facility informational brochure

D Photograph log

E Site diagrams

F Table of pit dimensions

G Chain of custody form for analytical samples

H Analytical Data Summary

ATTACHMENT A

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

№ 17230

LEASE OPERATOR/SHIPPER/COMPANY:

LEASE NAME:

TRANSPORTER COMPANY: | **TIME:** AM/PM

DATE: **VEHICLE NO.:** **DRIVER NO.:**

CHARGE TO:

TYPE OF MATERIAL

[ ] Production Water
[ ] Tank Bottoms
[ ] Other Material:

[ ] Drilling Fluids
[ ] Contaminated soil
[ ] BS&W Content: _____

[ ] Completion Fluids
[ ] C-117 No.: _____

Description: _____

VOLUME OF MATERIAL [ ] BBLS. _____ : [ ] YARD _____ : [ ] _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: _____
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

Sundance

CERTIFICATE OF WASTE STATUS

EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: _____

SOURCE: _____

DISPOSAL LOCATION: _____

_____

As a condition of acceptance for disposal, I hearby certify that this waste is an exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination and that non-exempt waste that is a "hazardous waste" pursuant to the provisions of 40 CFR Part 261, Subparts C & D, has not been added or mixed with the exempt waste in such a manner so as to make the reslutant mixture a "hazardous waste", pursuant to the provisions of 40 CFR, Section 261.3 (b).

I, the undersigned as the agent for _____ concur with the status of the waste from the subject site.

Name _____

Title _____

Address _____

_____

Signature _____

Date _____

CERTIFICATE OF WASTE STATUS

NON–EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: _____

SOURCE: _____

DISPOSAL LOCATION: SUNDANCE SERVICES INC.

_____

As a condition of acceptance for disposal, I hearby certify that this waste is a non–exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non–hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for _____ concur with the status of the waste from the subject site.

Name _____

Title/Angency _____

Address _____

_____

Signature _____

Date _____

P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Sundance

Form C-13
Originated 8/8/9

Submit Origina
Plus 1 Cop
to appropriat
District Offic

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☐ Verbal Approval Received: Yes ☐ No ☐	4. Generator 5. Originating Site
2. Management Facility Destination	6. Transporter
3. Address of Facility Operator	8. State
7. Location of Material (Street Address or ULSTR)	

9. Circle One:

A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.
B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved.

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

Estimated Volume _____ cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: _____ TITLE: _____ DATE: _____
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: _____ TELEPHONE NO. _____

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY: _____ TITLE: _____ DATE: _____

Sundance

+ Submit 5 copies to Appropriate District Office

DISTRICT I
P.O.Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

Form C-117 A
Revised 4-1-91

PERMIT NO._____

TANK CLEANING, SEDIMENT OIL REMOVAL, TRANSPORTATION OF MISCELLANEOUS HYDROCARBONS AND DISPOSAL PERMIT

Operator or Owner_____ Address_____

Lease or Facility Name_____ Location_____
U.L. - Sec. - Twp. - Rge.

OPERATION TO BE PERFORMED:

☐ Tank Cleaning ☐ Sediment Oil Removal ☐ Transportation of Miscellaneous Hydrocarbons

Operator or Owner Representative authorizing work_____

Date Work to be Performed_____

TANK CLEANING DATA Tank Number_____ Volume_____

Tank Type_____ Volume Below Load Line_____

SEDIMENT OIL OR MISCELLANEOUS HYDROCARBON DATA

Sediment Oil from: ☐ Pit ☐ Cellar ☐ Other

MISCELLANEOUS OIL

Tank Bottoms From: ☐ Pipeline Station ☐ Crude Terminal ☐ Refinery ☐ Other*

Catchings From: ☐ Gasoline Plant ☐ Gathering Lines ☐ Salt Water Disposal System ☐ Other*

Pipeline Break Oil or Spill ☐

*Other (Explain)_____

_____

VOLUME AND DESTINATION: Estimated Volume _____ Bbls. Field test volume of good oil _____ Bbls.
(Not required prior to Division approval)

Destination (Name and Location of treating plant or other facility)_____

_____

DESTRUCTION OF SEDIMENT OIL BY: ☐ Burning ☐ Pit Disposal ☐ Use on Roads or firewalls ☐ Other

(Explain)_____

Location of Destruction_____

Justification of Destruction_____

CERTIFICATION: (APPLICATION MAY BE MADE BY EITHER OF THE FOLLOWING)

I hereby certify that the infomation above is true and complete to the best of my knowledge and belief.

Owner_____ Transporter_____

By_____ Address_____

Title_____ Signature_____

Date_____ Title_____ Date_____

OIL CONSERVATION DIVISION

Approved By_____ Title_____ Date_____

A COPY OF THIS FORM MUST BE ON LOCATION DURING TANK CLEANING, REMOVAL OF SEDIMENT OIL OR MISCELLANEOUS HYDROCARBONS, AND MUST BE PRESENTED WITH TANK BOTTOMS, SEDIMENT OIL OR MISCELLANEOUS HYDROCARBONS AT THE TREATING PLANT TO WHICH IT IS DELIVERED.

DISTRIBUTION BY OCD	
	Santa Fe
	File
	Operator
	Transporter (2)

Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ATTN: LEAH

Form
Origina

Subm
Pl
to a
Dist

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator
Verbal Approval Received: Yes ☐ No ☒	5. Originating Site HOBBS FACI
2. Management Facility Destination SUNDANCE SERVICES INC.	6. Transporter UNKNOWN
3. Address of Facility Operator P.O. BOX 1737 EUNICE NM 88231	8. State NEW MEXICO
7. Location of Material (Street Address or ULSTR) 1718 S. DAL PASO HOBBS, NM 88240	

9. Circle One:

A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from Generator; one certificate per job.

B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysi PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardou listing or testing will be approved.

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Western Atlas Logging Service location in Hobbs, NM. This waste water is generated from the truck wash bay that is collected into a wash rack water tank. I have included a certificate of waste status and chain of custody Sundanc Services Would like approval to accept this material into our Parabo Disposal Facility.

AUG 1998
RECEIVED
Hobbs
OCD

Estimated Volume 40 bbls/cy Known Volume (to be entered by the operator at the end of the haul) _____

SIGNATURE: Donna L. Roach TITLE: Office Manager DATE: 8-20-98
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Donna L. Roach TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: [signature] TITLE: Env Engr DATE: 8/21/98

APPROVED BY: SF By W Price jr TITLE: _____ DATE: 8/21/98

WESTERN ATLAS

Atlas Wireline Services

To: Donna Roach

From: Western Atlas Logging Service

August 20, 1998

This is a request to dispose of waste water generated from the truck wash bay at the Western Atlas Logging Services Location. This waste was generated from normal operations of Western Atlas.

David Kassisieh

David Kassisieh

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: 1718 S. DAL PASO

SOURCE: Sump

DISPOSAL LOCATION: Basin

As a condition of acceptance for disposal, I hearby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for [illegible] Atlas Logging Corp. concur with the status of the waste from the subject site.

Name: David Kassisieh

Title/Angency: Station Manager

Address: P.O. Box 1858
Hobbs, NM 88240

Signature: David Kassisieh

Date: 8-18-98

Page____of____

TraceAnalysis, Inc.

6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424
Tel (806) 794 1296 Fax (806) 794 1298
1 (800) 378 1296

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

LAB Order ID #________

Company Name: WESTERN ENVIRONMENTAL CONSULTANTS Phone #: 505-392-5021
Address: P.O. BOX 1816 Hobbs, NM 88240 Fax #: 505-392-9376
Contact Person: ALLEN Hodge
Invoice to:
(If different from above)
Project #: WESTERN ATLAS Project Name: WASH RACK WATER TANK
Project Location: Hobbs, NM Sampler Signature: [signature]

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE		SAMPLING: DATE	TIME	MTBE 8020/602	BTEX 8020/602	TPH	PAH 8270	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles NO - PEST	TCLP Semi Volatiles NO - HERB	RCI	GC.MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 8080/608	BOD, TSS, PH					Turn Around Time if different from standard	Hold
	WASH RACK	3	2-1L	✓					X					12-24-97	12:15						X	X	X	X											
	WATER TANK		1-500ml	✓							X																								

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
David Kaminski	12-24-97	12 PM	[signature]	12-24-97	12:03
[signature]	12-24-97	7:04 am			
		10	Received at Laboratory by: [signature]	12-23-97	12:05 pm

LAB USE ONLY
Intact Y / N
Headspace Y / N
Temp ____ °
Log-in Review ____

REMARKS: THIS SAMPLE WAS A COMPOSITES SAMPLE TAKEN FROM THE WASH RACK WATER TANK
A.H.

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

Carrier #____

CHART COPY

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
WESTERN ENVIRONMENTAL CONSULTANTS
Attention: Allen Hodge
P. O. Box 1816
Hobbs, NM 88240

January 08, 1998
Receiving Date: 12/29/97
Sample Type: Water
Project No: Western Atlas
Project Location: Hobbs, NM

Extraction Date: 01/05/98
Analysis Date: 01/05/98
Sampling Date: 12/24/97
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Wash Rack
Water Tank

TA#	Field Code	REACTIVITY	SULFIDES (ppm)	CYANIDES (ppm)	CORROSIVITY	pH (s.u.)	FLASHPOINT (^{o} F)
	EPA LIMIT =	—	500	250	—	<2 >12.5	>140^{o} F
T88133	Wash Rack	Non-reactive	<10	<2.5	Non-corrosive	7.5	>150
QC	Quality Control	—	—	—	—	7.0	—
RPD		0	0	0	0	0	0
% Extraction Accuracy		—	—	—	—	—	—
% Instrument Accuracy		—	—	—	—	100	—

METHODS: EPA SW 846-2.1.3, 2.1.2, 1010.
CHEMIST: JG

Director, Dr. Blair Leftwich

1-8-98
DATE

TRACEANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
WESTERN ENVIRONMENTAL CONSULTANTS
Attention: Allen Hodge
P. O. Box 1818
Hobbs, NM 88240

January 08, 1998
Receiving Date: 12/29/97
Sample Type: Water
Project No: Western Atlas
Project Location: Hobbs, NM

Extraction Date: 12/23/97
Analysis Date: 12/31/97
Sampling Date: 12/24/97
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Wash Rack Water Tank

TCLP METALS (mg/L)

TA#	Field Code	As	Se	Cr	Cd	Pb	Ag	Ba	Hg
	EPA LIMIT =	5.0	1.0	5.0	1.0	5.0	5.0	100.0	0.20
T88133	Wash Rack	0.24	<0.10	0.44	0.34	0.37	<0.05	0.48	<0.01
QC	Quality Control	5.1	5.1	4.9	5.1	5.1	1.0	5.0	0.050
Reporting Limit		0.10	0.10	0.05	0.02	0.10	0.05	0.10	0.01
RPD		0	0	0	0	5	0	0	2
% Extraction Accuracy		100	90	90	90	95	100	90	115
% Instrument Accuracy		101	102	97	101	102	100	99	100

CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba: RR Hg: SA/RR
METHODS: EPA SW 846-1311, 6010B, 7470.
TCLP METALS SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba; 0.25 mg/L Ag; 0.050 mg/L Hg.
TCLP METALS QC: 5.0 mg/L As, Se, Cd, Cr, Pb, Ba: 1.0 mg/L Ag; 0.050 mg/L Hg.

Director, Dr. Blair Leftwich

1-8-98
Date

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4775 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
WESTERN ENVIRONMENTAL CONSULTANTS
Attention: Allen Hodge
P. O. Box 1816
Hobbs, NM 88240

January 08, 1998
Receiving Date: 12/29/97
Sample Type: Water
Project No: Western Atlas
Project Location: Hobbs, NM

Extraction Date: 01/02/98
Analysis Date: 01/05/98
Sampling Date: 12/24/97
Sample Condition: Intact & Cool
Sample Received by: VW
Project Name: Wash Rack Water Tank

TCLP Semi-Volatiles (mg/L)	EPA Limit	Reporting Limit	T88133 Wash Rack	QC	RPD	%EA	%IA
Pyridine	5.0	0.05	ND	83	0	0**	104
1,4-Dichlorobenzene	7.5	0.05	ND	74	7	54	92
o-Cresol	200.0	0.05	ND	76	6	80	95
m,p-Cresol	200.0	0.05	ND	70	3	143	88
Hexachloroethane	3.0	0.05	ND	70	4	63	88
Nitrobenzene	2.0	0.05	ND	78	1	69	98
Hexachlorobutadiene	0.5	0.05	ND	69	6	51	86
2,4,6-Trichlorophenol	2.0	0.05	ND	78	0	72	95
2,4,5-Trichlorophenol	400.0	0.05	ND	82	2	80	102
2,4-Dinitrotoluene	0.13	0.05	ND	78	0	76	98
2,4-D	10.0	0.05	ND	68	2	210	85
Hexachlorobenzene	0.13	0.05	ND	68	3	62	85
2,4,6-TP	1.0	0.05	ND	85	1	436	106
Pentachlorophenol	100.0	0.05	ND	89	12	53	111

Surrogates	% RECOVERY
2-Fluorophenol	14*
Phenol-d6	11
Nitrobenzene-d5	32*
2-Fluorobiphenyl	30*
2,4,6-Tribromophenol	29
Terphenyl-d14	60

ND - Not Detected

***NOTE: Surrogate recovery out of standard range.**
****NOTE: Extraction Accuracy out of standard range due to matrix effects encountered in sample.**

Methods: EPA SW 846-1311, 8270.
CHEMIST: RP/JG

Director, Dr. Blair Leftwich

1-8-98
DATE

TRACE ANALYSIS, INC.

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4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
WESTERN ENVIRONMENTAL CONSULTANTS
Attention: Allen Hodge
P. O. Box 1816
Hobbs, NM 88240

January 08, 1998
Receiving Date: 12/29/97
Sample Type: Water
Project No: Western Atlas
Project Location: Hobbs, NM

Extraction Date: 12/30/97
Analysis Date: 12/31/97
Sampling Date: 12/24/97
Sample Condition: I & C
Sample Received by: VW
Project Name: Wash Rack
Water Tank

TCLP VOLATILES (mg/L)	EPA LIMIT	Reporting Limit	T88133 Wash Rack	QC	RPD	%EA	%IA
Vinyl chloride	0.20	0.05	ND	85	10	92	85
1,1-Dichloroethene	0.70	0.05	ND	96	1	80	96
Methyl Ethyl Ketone	200.0	0.5	ND	88	1	106	88
Chloroform	6.00	0.05	ND	93	2	94	93
1,2-Dichloroethane	0.50	0.05	ND	93	4	97	93
Benzene	0.50	0.05	ND	96	1	97	96
Carbon Tetrachloride	0.50	0.05	ND	117	4	108	117
Trichloroethene	0.50	0.05	0.11	96	2	97	96
Tetrachloroethene	0.70	0.05	ND	99	0	103	99
Chlorobenzene	100.00	0.05	ND	102	1	100	102
1,4-Dichlorobenzene	7.50	0.05	ND	104	3	104	104

SURROGATES	% Recovery
Dibromofluoromethane	89
Toluene-d8	93
4-Bromofluorobenzene	96

ND = Not Detected

METHODS: EPA SW 846-1311, 8260.
CHEMIST: RW

Director, Dr. Blair Leftwich

1-8-98
DATE

ATTACHMENT B

THE REPRODUCTION OF

THE

FOLLOWING

DOCUMENT (S)

CANNOT BE IMPROVED

DUE TO

THE CONDITION OF

THE ORIGINAL

Standard

FIELD NOTES

SHALL INCLUDE, AS A MINIMUM:

- Sample identification number.
- Purpose of sample.
- Analysis method to be used.
- Who collected the sample.
- How the sample was collected.
- Sample quantity.
- Sample preservation, if any.
- Date and time of sample.
- Where the sample was collected.
- Chain of Custody

Standard

NECESSARY INFORMATION ON LABORATORY DATA REPORT FORMS

* Name of laboratory.

* Name of person responsible for analysis.

* Data (units)
  Sample description (solid, liquid, etc.)
  Field Code
  Sampling Date
  Receiving Date

* Cross reference to laboratory analysis record.

* Parameter being analyzed.

* Result of analysis with units specified.

* Analytical method used. (Must have SW-846 numbers)

* Minimum detection value of analytical method used.
  (statement "ND" not acceptable)

* Quality control results (as appropriate).
  - Precision (deviation between sample and duplicate)
  - Extracation Accuracy (recovery of spike)
  - Instrument Accuracy (documentation of calibration)

* Signature of person responsible for analysis.

Sundance

II. WASTE CLASSIFICATION AND DETERMINATIONS.

All generators of solid waste is bound by law to make a positive waste determination and to properly dispose of the waste.

In order to dispose of waste into a NMOCD "oil field type" permitted facility, the New Mexico Oil Conservation Division classifies waste in the following fashion.

1. Exempt Oilfield Waste.
2. Exempt, Non-Oilfield Waste.
3. Non-exempt, Non-hazardous Waste from Oil & Gas Activities.
4. Non-Exempt,Non-hazardous,Non-Oilfield Waste.
5. Hazardous Waste.

The NMOCD requires generators to classify and determine if the waste is non-hazardous before it can be accepted, except for exempt oilfield waste.

Items one (1) and three (3) above are allowed to be disposed of into NMOCD permitted facilities with conditions.

Items (2) is allowed only upon emergency conditions and must have joint approval from constituent agencies, such as NMED and NMOCD and or EPA.

Items (4) and (5) are not allowed in NMOCD facilities. It should be pointed out that NMOCD does not allow any quantities of Hazardous waste to be disposed of into New Mexico NMOCD facilities. <u>This means that the exemption for small quantity generators under the RCRA laws is not allowed to be used if disposing into a NMOCD permitted facility.</u>

Included in this section is various view graphs and a copy of a recent publication of the Federal Register clarifying the EPA-RCRA E&P exemptions.

Sundance

III. NEW MEXICO OIL CONSERVATION DIVISION'S PROCEDURE FOR ACCEPTING "NON-EXEMPT" WASTE.

The NMOCD has instituted the following procedure to be used by generators of "non-exempt" waste.

1. The generator should contact one of the approved disposal facilities listed in the appendix.

2. The operator of the disposal facility will then require certain information from the generator in order to properly fill out the "REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE" form.

3. Typically if it is the first request from a generator to dispose of waste, then the operator of the disposal will require the generator to supply a complete description of the process generating the waste, other words a waste profile will have to be supplied.

   An analysis of the waste stream will be required. This should include full TCLP testing of the waste stream. It should include as a minimum the following:

   A. RCI...Reactivity, Corrosivity, and Ignitability

   B. TC ..Toxicity Characteristics
      1. Volatiles.
      2. Semi-volatiles.
      3. TCLP metals.

   C. Typically herbicides and pesticides do not have to be run.

   D. All of the above requirements shall be per EPA SW-846 procedures. This will be discussed in the next section in order so the generator of the waste will understand what NMOCD is looking for.

   The generator will also be required to certify that the waste stream does not contain any RCRA "listed" hazardous waste. This can be accomplished by using the form included in this document called "CERTIFICATE OF WASTE STATUS FOR NON-EXEMPT WASTE MATERIAL". The NMOCD does allow other versions of this form.

Sundance

4. Once all of the above has been completed, then the operator of the disposal facility submits this paper work to the local NMOCD District office. At this time the district reviews all of the submitted material.

   If everything thing is in order then this submittal is forwarded on to our Santa Fe Environmental Bureau for final approval. If approved, then it is forwarded back to the district and the district will notify and forward on to the disposal operator. Please note the turn around time for this procedure is approximately seven days. Generators should allow for this time so as not to let their tanks or sumps overfill.

   The disposal operator then makes arrangements with the generator to transport the waste to it's facility. At this time the NMOCD does not require manifesting, however we recommend it for waste tracking purposes. There are requirements placed on the transporter by the operator of the disposal facility which is required under its permit.

5. Steps one through four is the normal procedure to be used every time a generator request to dispose of waste. Please note there are no blanket approvals for "non-exempt" waste. Each shipment of waste must be handled on a case-by-case basis. However, there can be multiple loads approved on one request, in other words it requires more than one truck to haul the waste.

6. The NMOCD does allow a generator to use the same analytical work for a particular waste to be good for a period of one year. In this case, we require that the generator submit with his request a "WASTE STREAM CERTIFICATION FORM" stating that the waste stream has not changed from the last time the analytical work was performed.

7. Additional paper work for out-of-state generators may be required. For example, generators located in the state of Texas usually are ask to supply their Texas registration and waste code numbers.

Sundance

IV. SAMPLING, ANALYTICAL TESTING AND DATA REPORTING REQUIREMENTS.

As indicated in the previous information the NMOCD generally requires that a full TCLP analysis be completed on the waste stream and that EPA-SW 846 procedures be used.

One of the most important aspects of sampling is to ensure that a representative sample of the waste stream is taken.

It is recommended that personnel taking samples should be trained or have on the job experience in this area, if not then we recommend that a third party consultant perform these task.

The following discussions and view graphs are designed to help you if sampling, testing and data reporting is required.

Standard

T C L P

COMPLIANCE CRITERIA

Maximum Concentrations

Metals:	mg/l
Arsenic	5.0
Barium	100
Cadmium	1.0
Chromium	5.0
Lead	5.0
Mercury	0.2
Selenium	1.0
Silver	5.0

Herbicides:	mg/l
2,4-D	10
2,4,5-TP (Silvex)	1.0

Volatiles:	mg/l
Benzene	0.5
Carbon Tetrachloride	0.5
Chlorobenzene	100
Chloroform	6.0
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
Methyl Ethyl Ketone	200
Tetrachloroethylene	0.7
Trichloroethylene	0.5
Vinyl Chloride	0.2

Semivolatiles:	mg/l
o-Cresol	200
m-Cresol	200
p-Cresol	200
2,4-Dinitrotoluene	0.13
Hexachlorobenzene	0.13
Hexachlorobutadiene	0.5
Hexachloroethane	3.0
Nitrobenzene	2.0
Pentachlorophenol	100
Pyridine	5.0
2,4,5-Trichlorophenol	400
2,4,6-Trichlorophenol	2.0
1,4-Dichlorobenzene	7.5

Pesticides:	mg/l
Chlordane	0.03
Endrin	0.02
Heptachlor	.008
Heptachlor Epoxide	.008
Lindane	0.4
Methoxychlor	10
Toxaphene	0.5

Sundance

Hazardous Characteristics

IGNITABILITY — A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

- It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60°C (140°F).
- It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
- It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by EPA under sections 260.20 and 260.21.

CORROSIVITY — A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

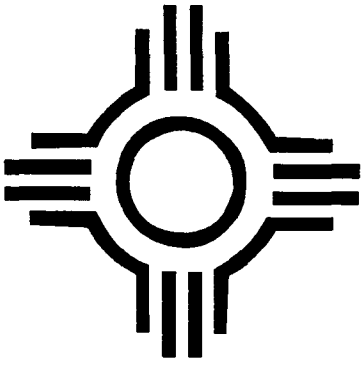
- It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5.
- It is a liquid and corrodes steel at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F).

REACTIVITY — A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

- It is normally unstable and readily undergoes violent change without detonating.
- It reacts violently with water.
- It forms potentially explosive mixtures with water.
- When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- It is a forbidden explosive as defined by EPA.

TOXICITY — A solid waste exhibits the characteristic of toxicity if the extract from a representative sample of the waste contains any contaminants listed by EPA at a concentration equal to or greater than a respective thresholds value.

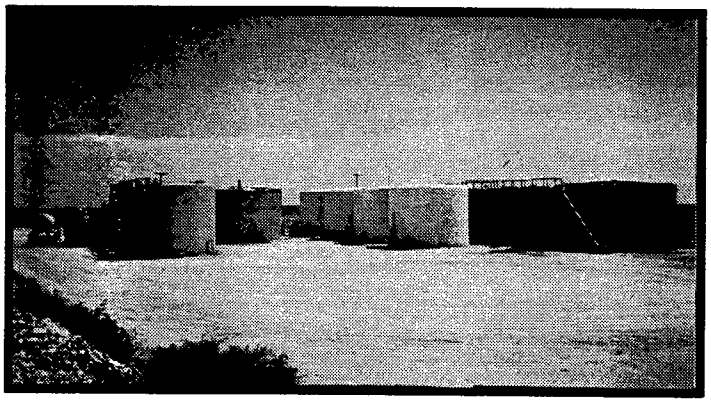
ATTACHMENT C

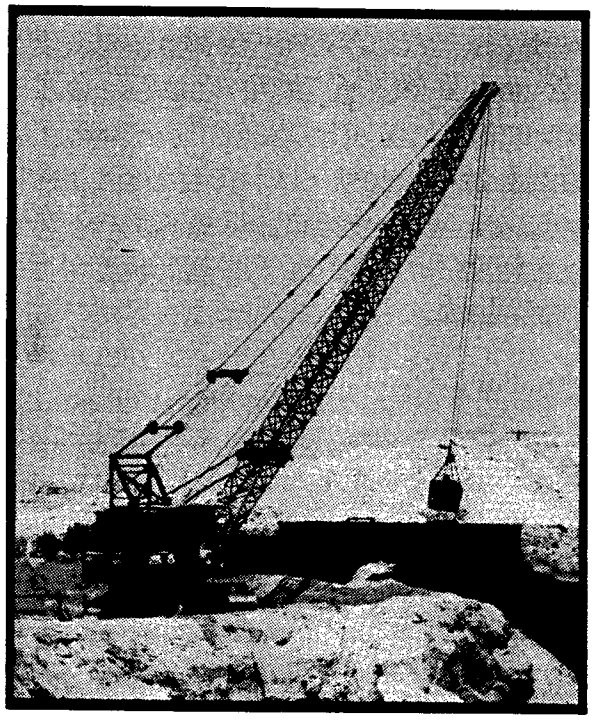


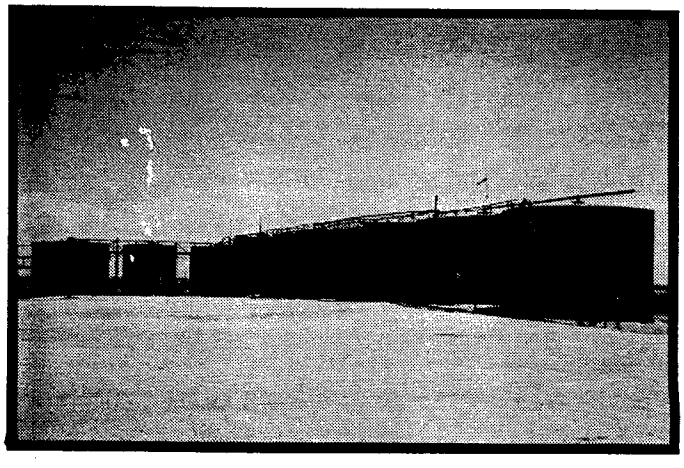
Sundance Services, Inc.

Parabo Disposal Facility

Sundance Services, Incorporated is proud to present our informational pamphlet for your review. We appreciate the time our customers and potential customers will spend reviewing the information about our company and its facilities. Furthermore, we are pleased to provide facility tours and inspections at our customers' convenience. If you have any questions about our company, need an audit packet or would like to arrange a site visit, please call (505) 394-2511.





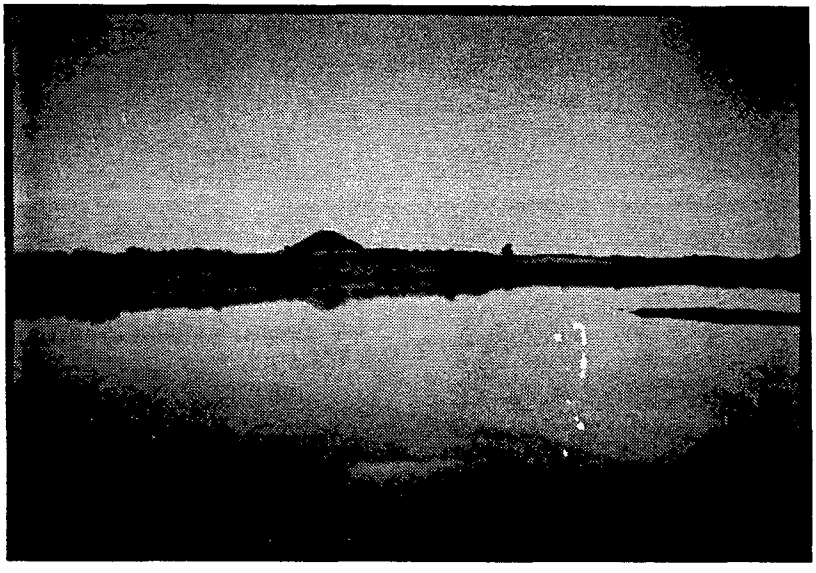


Sundance Services, Inc. Parabo Disposal Facility is an oilfield waste disposal facility which has been in continual operation since 1978. Sundance Services is a New Mexico Corporation which operates the Parabo Disposal Facility. The Parabo Disposal Facility is permitted by the New Mexico State Oil Conservation Division (Order number R-5516 and new Rule 711 permit # NM-01-0003) to build and operate a surface waste disposal facility and oil treatment plant. The Parabo Disposal Facility is operated in full compliance with all regulations from appropriate Governmental agencies.

The Parabo Disposal Facility accepts and processes materials which are classified as wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy. These wastes include produced water, BS&W (basic sediment and water), tank bottoms, oil contaminated soils, drill cuttings, cement and muds which are excluded from regulation by the Resource Conservation and Recovery Act (RCRA). No industrial or hazardous wastes are handled or processed.

The Facility

Located three miles east of Eunice, New Mexico on the Texas border, the Parabo Disposal Facility is central and convenient to all of the Permian Basin. The facility is situated on a geological formation of non-permeable, Triassic red bed clay. The disposal operation utilizes pits formed from the activities of Wallach Concrete gravel mining plant at the location. These readily available, naturally lined pits, along with the year-around sunshine and dry climate make an ideal location for oilfield waste disposal. To complement a first-class disposal facility, Sundance Services employs a staff with over 50 years of cumulative waste disposal experience to ensure the customer's waste is managed in a professional manner.

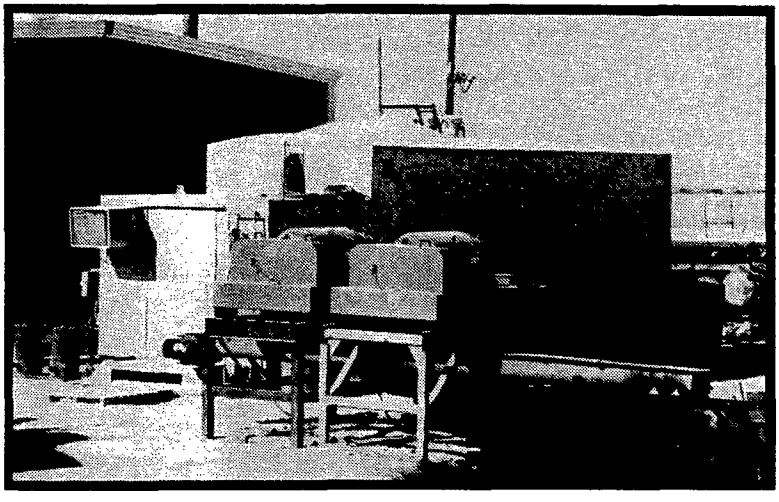


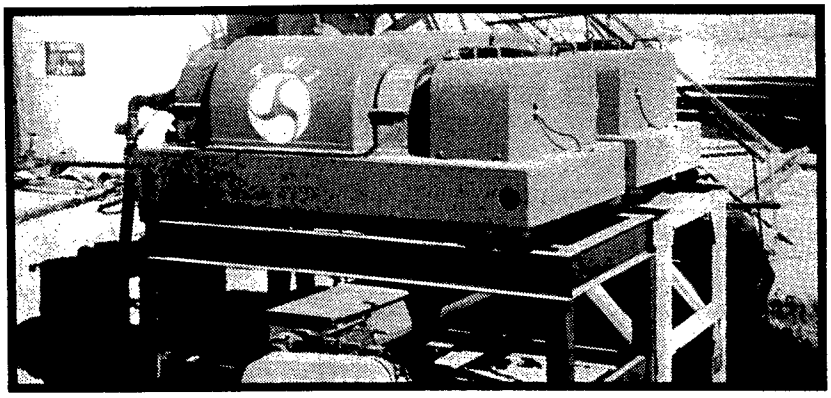
Technology

In addition to providing a first class disposal operation, Sundance Services is dedicated to waste minimization technologies. By an exclusive arrangement, Sundance Services uses a patented microwave sludge treatment technology owned and developed by Thermal Wave International, Inc. of Austin, Texas.

Thermal Wave International (TWI) has developed an oil sludge recovery process using high-power microwave energy to separate hydrocarbons from contaminants found in different oil sludges. Microwave energy is a more cost effective method to heat oily sludges than conventional gas-fired treatment methods. In addition to greater energy efficiency, microwave energy actually separates oil-water emulsions commonly found in waste oil sludges. Hydrocarbon molecules are transparent to the effects microwave radiation while water molecules are not. Because of this, microwave radiation excites water molecules but does not affect the hydrocarbons. By using microwave energy, the bonds between water and oil molecules are broken, which results in oil-water emulsion separation. By using microwave separation, the waste oil sludges are treated without the use of emulsion-breaking chemicals.

The TWI process is currently and permanently in operation at the Parabo Facility to treat sludges derived from tank bottoms, crude oil pits, skim oil, and any other source of oil containing high amounts of BS&W. All recoverable oil is removed from these sludges and purified to below 1% BS&W at a rate of over1,000 barrels per day. The water removed from the process is treated and evaporated, while the solids are dried and disposed of in the facility's solids disposal pits.

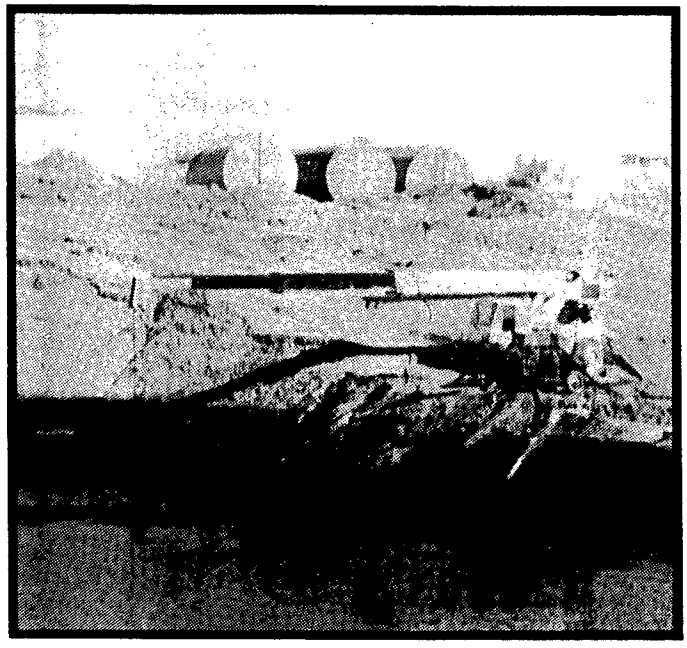




Sundance Services is presently using TWI's technology to remove and reclaim all material stored in its permitted BS&W pits. After the BS&W pits are emptied, Sundance Services will use TWI's microwave treatment system to treat BS&W as it is brought to the Parabo Disposal Facility. This process eliminates the storage of BS&W in open pits and the potential problems associated with open oil sludge storage.

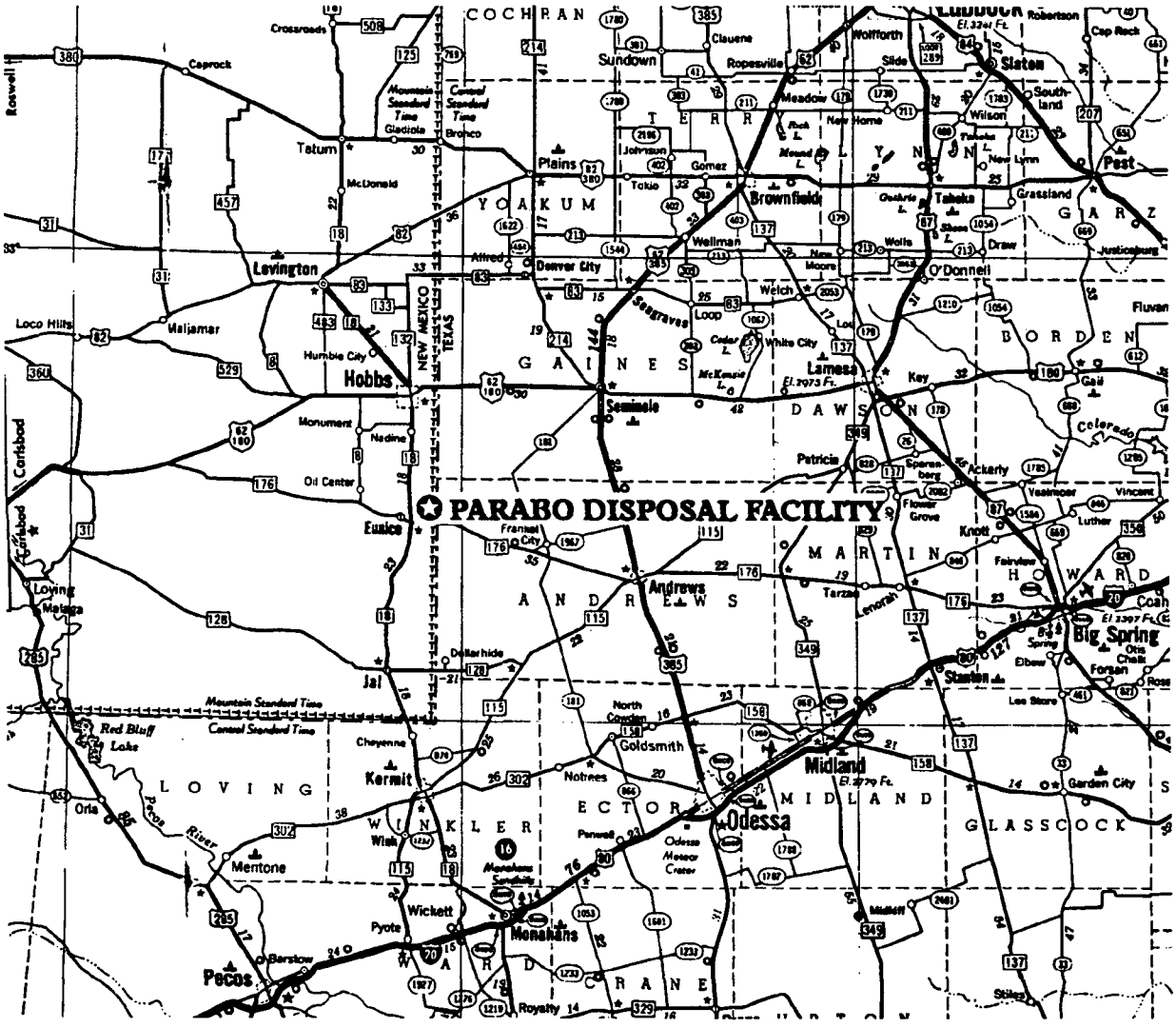
Service

Service is the most important part of our name. Sundance Services is in the business of providing our valued customers with the best possible service, tailored to individual customer requirements. Sundance Services has the equipment, the facilities, and expertise to handle almost any environmental project. Together with Thermal Wave International, Sundance Services has the ability to clean and recover oil from even the largest oil sludge pits and tanks. From expert advice to full turn-key environmental projects, our staff is dedicated to meeting our customer's environmental management needs.



Location

The Parabo facility is located on the Texas-New Mexico border due west of Andrews, Texas. The entrance to the facility is one eighth of a mile north of intersection Highway 18 and Highway 176.



Sundance Services' goal is to become the leading environmental service and disposal provider in the Permian Basin. Our strategy is to operate the finest facilities, use the best available technology to eliminate or minimize wastes, provide the best service and always meet the needs of our customers.

MATERIALS AND WASTE EXEMPT BY EPA FROM CONSIDERATION AS "HAZARDOUS WASTE";

* Produced water;
* Drilling fluids;
* Drill cuttings;
* Rig wash;
* Drilling fluids and cuttings from offshore operations disposed of onshore;
* Geothermal production fluids;
* Hydrogen sulfide abatement wastes from geothermal energy production;
* Well completion, treatment and stimulation fluids;
* Basic sediment and water and other tank bottoms from storage facilities that hold product and exempt waste;
* Accumulated materials such as hydrocarbons, solids, sand, and emulsion from production separators, fluid treating vessels, and production impoundments;
* Pit sludges and contaminated bottoms from storage or disposal of exempt wastes;
* Work over wastes;
* Gas plant dehydration wastes, including glycol-based compounds, glycol filters, filter media, backwash and molecular sieves;
* Cooling tower blowdown;
* Spent filters, filter media, and backwash (assuming the filter itself is not hazardous and the residue in it is from an exempt waste stream);
* Packing fluids;
* Produced sand;
* Pipe scale, hydrocarbon solids, hydrates, and other deposits removed from piping and equipment prior to transportation;
* Hydrocarbon-bearing soil;
* Pigging wastes from gathering lines;
* Wastes from subsurface gas storage and retrieval, except for the nonexempt wastes listed on the next page;
* Constituents removed from produced water before it is injected or otherwise disposed of;
* Liquid hydrocarbons removed from the production stream but not from oil refining;
* Gases from the production stream, such as hydrogen sulfide and carbon dioxide, and volatilized hydrocarbons;
* Materials ejected from a producing well during the process known as blowdown;
* Waste crude oil from primary field operations and production;
* Light organics volatilized from exempt wastes in reserve pits or impoundments or production equipment;
* Liquid and solid wastes generated by crude oil and crude tank bottom reclaimers.

Source: Federal Register, Thursday, March 29, 1990, p. 11, 798-11, 877.

MATERIALS AND WASTE NOT EXEMPT BY THE EPA.

* Unused fracturing fluids or acids;
* Gas plant cooling tower cleaning wastes;
* Painting wastes;
* Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spent solvents, spilled chemicals, and waste acids;
* Vacuum truck and drum rinsate from trucks, and drums transporting or containing nonexempt waste;
* Refinery wastes;
* Liquid and solid wastes generated by crude oil and tank bottom reclaimers;
* Used equipment lubrication oils;
* Used hydraulic fluids;
* Waste solvents;
* Waste in transportation pipeline-related pits;
* Caustic or acid cleaners;
* Boiler cleaning wastes;
* Boiler refractory bricks;
* Boiler scrubber fluids, sludges, and ash;
* Incinerator ash;
* Laboratory wastes;
* Pesticide wastes;
* Radioactive tracer wastes;
* Sanitary wastes;
* Drums, insulation, and miscellaneous solids;
* Waste compressor oil, filters, and blowdown.

The following OCD regulated facilities especially may be subject to hazardous waste rules on and after September 25, 1990:

**Oil and gas services companies having wastes such as vacuum truck rinsate.

**Crude oil treating plants and tank bottom reclaimers with liquid and solid wastes remaining after oil treatment and removal.

**Pipelines having waste in transportation pipeline=related pits.

Source: Federal Register, Wednesday, July 6, 1988, p.25 ,446-25 ,459

PERMITS FOR SURFACE WASTE DISPOSAL
AND
OIL TREATING PLANT
INCLUDING
PERMIT TRANSFER TO SUNDANCE
SERVICES, INC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING

CASE NO. 5899
ORDER NO. R-5516

APPLICATION OF ROBERT P. WALLACH
RAY A. WALLACH, AND PATRICIA LOUISE
WALLACH HOUSE FOR AN EXCEPTION TO
ORDER NO., MR-3221, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on or hearing at 9 a.m. on April 20, 1977 at Santa Fe, New Mexico, before the Oil Conservation of New Mexico, hereinafter referred to a the "Commission."

Now, on this 30th day of August, 1977, the Commission, a quorum being present, having considered the testimony present and the exhibits received at said hearing, and being fully advised in the premises.

FINDS:

(1) That due public notice having been given as requirement by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicants, Robert P. Wallach, Ray A. Wallach and Patricia Louise Wallach House, are the owners of certain gravel pits located in the SW/4 of Section 29, Township 21 South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That Order (3) of Commission Order no. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced in conjunction with the production of oil or gas, or both, on the surface of ;the ground, or in any pit, pond, lake, depression, draw, steam bed, or orroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

(4) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(5) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(6) That the applicants seek an exception to the provision of the aforesaid Order (3) to permit the commercial disposal of produced salt water in the pits described in Finding No. (2) above.

(7) That said pits have been utilized for the mining of Ogallala formation gravels for many years.

(8) That said Ogallala gravels were laid down within an elongate East-West trending channel eroded into the underlying Triassic red bed formations.

(9) That percolation tests indicate that said Triassic red beds are highly resistant to the downward percolation of water within the area of sail pits and are essentially impermeable.

(10) That the applicants propose to construct dikes and core trenches across and along said elongate channel in the Triassic red beds within said quarter section to create pits which are essentially impermeable to the lateral flow of water.

(11) That the applicants propose to limit the high water level in any such pit to at least four feet below the Triassic spill point in the pit.

(12) That salt water disposed of into any such impermeable as described in Findings Nos. (9) and (10) above will not percolate downward nor migrate laterally outward from said pit and create a hazard to fresh waters, but will evaporate.

(13) That approval for all of the pits requested by applicants in this case should not be granted at this time, but a pilot pit project utilizing the large central pit area described as Pit 1 and Pit 2 on Figure 4 of Exhibit A in this case should be approved, subject to certain requirements.

(14) That applicants should be required to provide adequate salt water settling tanks to permit removal of oil from water prior to placement of said water in the evaporation pit, in order to not impair water evaporation.

(15) That in order to ensure that no downward percolation nor outward migration of water from the authorized pit does not occur, certain monitor wells should be drilled into the Triassic red beds at specified locations around the pit and a Commission-approved method for monitoring said red beds beneath the pit should be employed.

(16) That an administrative procedure should be adopted whereby additional pits within the SW/4 of said Section 29 may be utilized for salt water disposal.

(17) That approval of the application subject to the above-described conditions will not cause waste, will not violate correlative rights, nor harm fresh waters.

(18) That the application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicants, Robert P. Wallach, Ray A. Wallach and Patricia Louis Wallach House, are hereby granted an exception to Order (3) of Commission Order No. R-3221, as amended, to commercially dispose of produced salt water in an unlined surface pit located in the SW/4 of Section 29, Township 21 South, Range 38 East, NMPM, Lea County, New Mexico, consisting of Pit 1 and Pit 2 as identified on Figure 4 of applicant's Exhibit A in the subject case.

(2) That prior to utilization of said pit for salt water disposal, applicant shall construct the following-described dikes and core trenches:

A. A north-northeast/south-southwest trending dike at the west end of the pit area;

B. A north-northwest/south-southeast trending combination core trench-dike at the east end of the pit area: and

C. An east-west trending core trench at the south side of the pit area.

(3) That the above-described dikes and core trenches shall be constructed to an elevation of 3,451 feet above see level and in accordance with good engineering practices and the specifications set forth on pages five and six of applicants Exhibit "A" in this case. Construction shall be under the supervision and responsibility of the consulting hydrologist in this case.

(4) That prior to utilization of the aforesaid pit for salt water disposal, applicant shall drill the following described monitor wells around the outer perimeter of said pit:

A. Nine monitor wells along the southern perimeter of said pit, being those wells depicted as monitor wells, pit one , on Figure 4 of applicant's Exhibit A in this case;

B. Three monitor wells at the southeast end of said pit, being those wells depicted as monitor wells, pits one and three on the aforesaid Figure 4;

C. Two monitor wells at the southwest end of said pit, being those wells depicted as monitor well, pits on and four on figure 4;

D. Four monitor wells at the west end of said pit, being those wells depicted as monitor wells on a north-northeast/south-southwest line approximately 75 feet west of the western dike for Pit no. 1; and

E. Three monitor wells along the northern perimeter of said pit, being those monitor well, pits one and two, and monitor well, pits one, two and three on Figure 4.

(5) That each of the above described monitor wells shall be drilled and cased under the supervision and responsibility of the consulting hydrologist in this case and shall be drilled to a sufficient depth to reach a plane 3427 feet above sea level, and shall be drilled six inches in diameter and cased with 4-inch PVC casing shall be perforated with at least eight holes per foot from the bottom of the casing to a point 3451 feet above sea level; the casing shall be capped at the surface and each monitor well checked fro fluids at least once a month during the first two years of pit operation (for disposal purposes) and quarterly thereafter. Analyses of waters encountered during such tests and the results of such analyses, as well as water levels, shall be reported in writing to the Hobbs District Office of the Commission with 30 days following sampling.

(6) That the applicant shall bore a hole laterally into the Triassic red beds from a point east of the approximate middle of the easternmost dike described in Order No. (2) above, said hole to be bored under the dike and penetrating a minimum of five feet into the pit area west of said dike ; ten feet beneath the top of the Triassic red beds and shall be cased and gravel packed; the westernmost five feet of said casing shall be perforated and the easternmost end of said casing shall be positioned to drain into a covered impermeable sump to detect possible percolation of waters from the for of the pit into the drain pipe; the monitoring procedures and reporting requirements of Order No. (5) above shall also apply to the aforesaid sump.

(7) In lieu of the percolation detection system required by Order No. (6) above, the Secretary-Director may authorize another acceptable means of detection of downward percolation of waters from the subject pit.

(8) The Secretary-Director shall order suspension of disposal operations into the subject pit if any of the monitoring procedures prescribed in Orders Nos. (4), (5), (6), or (7), or any other condition, gives him good cause to suspect outward migration or downward percolation of waters from said pit. Disposal operations shall not be resumed until the Secretary-Director is satisfied that such measures have been taken to ensure that continued disposal will not constitute a hazard to fresh waters in the area.

(9) That the applicants shall provide for the placement of a pipe, or acceptable substitute, in the pit, said pipe to be marked in such a manner as to readily indicate the depth of the water in the pit and the maximum elevation which the water in said pit shall be permitted to attain.

(10) That at no time shall disposal in the aforesaid pit be permitted if the total quantity of water in the pit, from both natural precipitation and previous disposal, reaches a plane four feet below the level of the spill point of the Triassic red beds or dikes around such pit, said plane being at an elevation of 3447 feet above sea level.

(11) That the applicant shall install and maintain in good condition wooden or metal settling tanks, and shall allow all oil field brines to remain in such tanks for a sufficient period of time to permit residual oil contained in said brines to be skimmed off, and not to be passed on with the brines to disposal pit.

(12) That the applicant shall install and maintain in good condition meters or other measuring devices to permit an accurate determination of the quantity of water disposed of in the pit.

(13) That the applicant shall file a monthly report with the commission in accordance with Rule 1120 of the Commission Rules and Regulations, reporting each source and quantity disposed of.

(14) That the Secretary-Director of the Commission may administratively authorize the utilization of any of the remaining pits in the SW/4 of said Section 29 for salt water disposal upon a showing by the applicants that such pits will be constructed and operated in conformance with the provisions of this order and upon a showing of satisfactory operation of the pit authorized herein for a period of at least on year.

(15) The Secretary-Director may amend the above-specified frequencies for monitoring upon a showing that such amendment would not constitute a hazard to the fresh water in the area.

(16) That the Secretary-Director of the Commission may by administrative order rescind the authorization for use of any pit approved under the provisions of this order whenever it reasonably appears to the Secretary-Director that such rescission would serve to protect fresh water supplies from contamination.

(17) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

Done at Santa Fe, New Mexico, on the day and year herein above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

PHIL R. LUCERO, CHAIRMAN

EMERY C. ARNOLD, MEMBER

JOE D. RAMEY, MEMBER & SECRETARY

*Original signatures on file

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7497
Order No. R-6940

APPLICATION OF PARABO, INC.
FOR AN OIL TREATING PLANT PERMIT,
LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 31, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 14th day of April, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Parabo, Inc. , seeks authority to construct and operate a chemical and heat treatment type oil treating plant at its salt water disposal site in the SW/4 of Section 29, Township 21 South, Range 38 East, NMPM, Lea County, New Mexico, for the processing of approximately 1500 barrels per day of raw material from tank bottoms, disposal water, and waste pits.

(3) That dikes, dams and/or emergency pits should constructed around the plant capable of holding the entire capacity of all tanks and vessels at the plant location in order that sediment oil, reclaimed oil, or waste oil cannot escape from the immediate vicinity of such plant.

(4) That the proposed plant and method of processing will efficiently process, treat, and reclaim the aforementioned waste oil, thereby salvaging oil which would otherwise be wasted.

(5) That the Director of the Division should be authorized to administratively grant approval for the expansion or modification of said plant.

(6) That the subject application should be approved as being in the best interests of conservation.

IT IS THEREFORE ORDERED:

(1) That the applicant, Parabo Inc., is hereby authorized to install and operate a chemical and heat-treatment type oil treating plant at its salt water disposal site in the SW/4 of Section 29, Township 21 South,

Range 38 East, NMPM, Lea County, New Mexico, for the purpose of treating and reclaiming sediment oil to be obtained from tank bottoms, waste pits and disposal water.

PROVIDED FURTHER, that prior to commencing operation of said plant, the applicant shall file with the Division and obtain approval of a performance bond in the amount of $10,000.00 conditioned upon substantial compliance with applicable statutes of the State of New Mexico and all rules, regulations and orders of the Oil Conservation Division.

(2) That the operator of the above-described oil treating plant shall clear and maintain in a condition clear of all debris and vegetation a fireline at least 15 feet in width and encircling the site upon which the plant is located.

(3) That dikes, dams and/or emergency pits shall be constructed around the plant capable of holding the entire capacity of all tanks and vessels at the plant location and capable of preventing the escapee of any sediment oil, reclaimed oil, or waste oil from the immediate vicinity of said plant.

(4) That the disposal of waste water accumulated in conjunction with the operation of the above-described plant on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or orroyo, or in any watercourse, or in any other place or in any manner which will constitute a hazard to any fresh water supplies is hereby prohibited.

(5) That the Director of the Division may administratively grant authority for the expansion or modification of said plant upon request and a demonstration that such expansion of modification is upon contiguous acreage and is otherwise consistent with this order and Division Rules and Regulations.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
DIRECTOR

*Original signature on file

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505

October 24, 1995

CERTIFIED MAIL
RETURN RECEIPT NO. Z-765-962-578

Mr. Richard C. Jackson
Sundance Services, Inc.
PO Box 1737
Eunice, New Mexico 88241

RE: Transfer of Parabo Facility (NM-01-0003)
Lea County, New Mexico

Dear Mr. Jackson:

The Oil Conservation Division (OCD) has received both a request from Sundance Services, Inc. (dated September 18, 1995) and Parabo, Inc. (dated September 20, 1995) to transfer ownership of the Parabo Waste Management Facility, located in Section 29, Township 12 South, Range 39 East, NMPM, Lea County, New Mexico, to Sundance Services, Inc. (Sundance). The request **is hereby approved** in accordance with OCD Rule 711.

Pursuant to OCD Rule 711 a twenty five thousand dollar ($25,000) surety or cash bond, in a form approved by the Division, is required prior to Sundance assuming ownership. Please be advised OCD Rule 711 is currently being modified to change bonding requirements such that the surety or cash bond required for each commercial facility is equal to the estimated closure cost of the facility. This facility will be subject to this modification and Sundance will be required to conform to the new bonding requirement when the rule change is completed.

All modifications and alternatives to the approved disposal methods must receive prior OCD approval. Sundance is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this transfer does not relieve Sundance of liability should their operation result in pollution of surface waters, ground water or the environment.

Please be advised that all tanks exceeding 16 feet in diameter and exposed pits, ponds or lagoons must be screened, netted or otherwise rendered nonhazardous to migratory birds. In addition, OCD Rule 310 prohibits oil from being stored or retained in earthen reservoir, or in open receptacles.

If you have any questions, please do not hesitate to contact Chris Eustice at (505) 827-7153.

Sincerely,

William J. LeMay
Director

WJL/cee

Attachment

xc: OCD Hobbs Office

ATTACHMENT D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 17 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Initial "jet-out" pit in Pit #7, subsequent cells in background
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 18 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #3, evaporation pit
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 19 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #2, evaporation pit
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 13 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Cattle tracks below soil pile; oily contamination in background
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 14 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Tracks in oily soil below soil pile
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 15 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Monitoring wells on east side of Pit #7, looking S
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 16 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Initial "jet-out" pit in Pit #7, subsequent cells in background
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 9 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #6, evaporation pit
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 10 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Drum storage area
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 11 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: South portion of Pit #7, looking N
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 12 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Contaminated soil pile, looking W
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

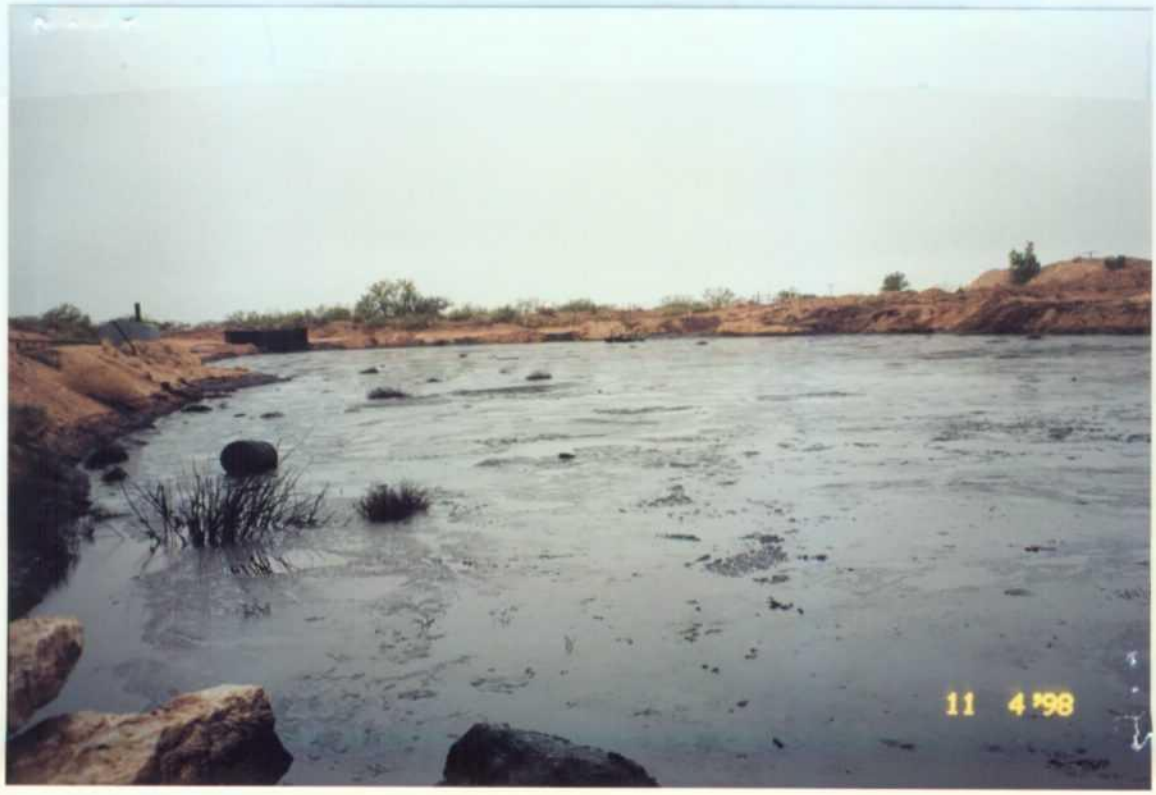


Photo Number: 5 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #4, disposal pit for liquids/sludges
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 6 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #1, oil in pit & on banks
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 7 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #1, looking NW
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 8 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #5, oil on surface
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 1 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Treatment tanks for BS&W
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 2 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Product oil tanks for recovered oil
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Official Photograph Log

Photo Number: 3 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Rock mining pit adjacent to tank battery
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

Photo Number: 4 Photographer: T. Reeves, SAIC
Location: Sundance Services, Parabo Facility
Subject: Pit #4, disposal pit for liquids/sludges
City/County: Eunice/Lea State: NM
Date: 11/04/98 Time: am Weather: cloudy, cool

ATTACHMENT E

Site diagram.

"ITEM 3"

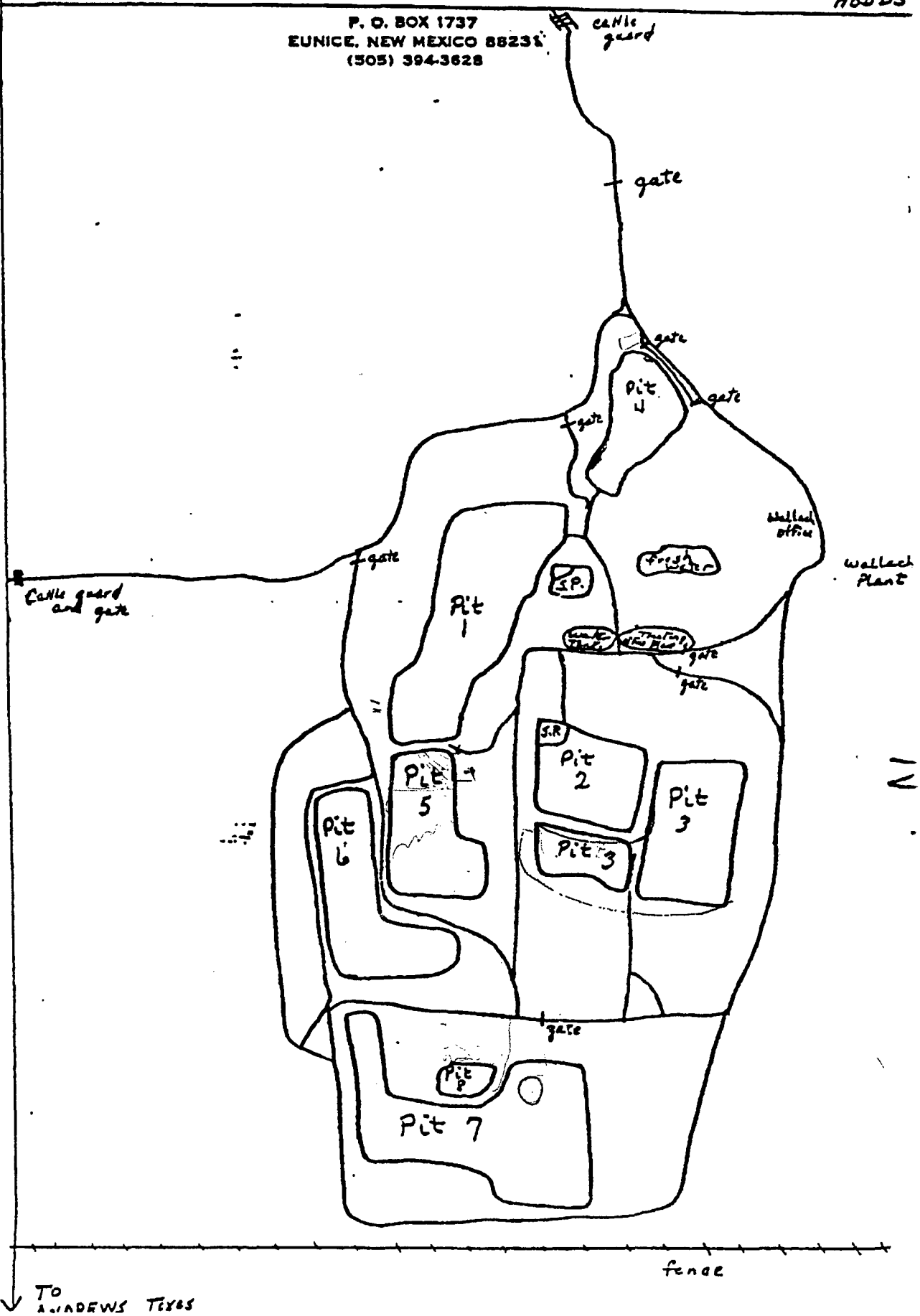
To Eunice N.M.

To Jal, N.M.

To Hobbs

PARABO, INC.

P. O. BOX 1737
EUNICE, NEW MEXICO 88231
(505) 394-3628



To Andrews Texas

ATTACHMENT F

Sundance

	SURFACE IMPOUNDMENTS							LAND FILL
	PIT #1	PIT #2	PIT #3	PIT #4	PIT #5	PIT #6	PIT #7	PIT #8
	PRODUCED WATER	PRODUCED WATER	PRODUCED WATER	B S & W	PRODUCED WATER	PRODUCED WATER	PRODUCED WATER	SOLIDS
DIMENSIONS	7.5 AC	2 AC	2 AC	3 AC	5 AC	16 AC	1 AC	
DEPTH	5 FT.	5 FT.	5FT.	30 FT.	6FT.	5 FT.	20 FT.	----
AGE	12 YRS.	12 YRS.	12 YRS.	12 YRS.	12 YRS.	8 YRS.	8 YRS.	8 YRS.

MATERIALS OF CONSTRUCTION: TRIASSIC REDBED CLAY

LINER TYPE & PERMIABILITY: TRIASSIC REDBED - 1×10^{-7} CM/JEC

LEACHATE COLLECTION SYSTEM: N/A - NONE

GROUND WATER MONITORING SYSTEM: MONITOR WELLS SURROUND THE PERIPHERY OF ALL PITS

WASTE INTRODUCED OVER THE LIFE OF OPERATION: SALT, SAND, SILT, IRON, SULFIDE - ALL PITS

B S & W PIT - OIL, SALT, SAND, SILT, IRON SULFIDE

ATTACHMENT G

GULF STATES ANALYTICAL

CORELAB

6310 Rothway, Houston, Texas 77040
(713) 690-4444, Fax (713) 690-5646

1 Company: SAIC | Address: ... Gallows Road Dunnloring | Tele #: 703 645 | Fax #: 6973

Reports Sent To: | P O #: | Project #:

Project Name: NM Oil pits | Project Location:

Sampler(s) Name: (Signature) [illegible]

Courier: Fed Ex

5 Request for Analysis

2 Field Sample ID	**3** Sampling Date	Time	**4** Matrix: Water	Soil	Sludge	Oil	Other	# of Containers	Haz. Sample (Y/N)	VOA	SVOA	Pest	PCB	Herb	Metals	Oil+Grease		
1. WP-45-FB	1315	11/4/98	X					8		X	X	X	X	X	X	X		
2. WP-45-Pit-4-1	1445	↓	X					8		↓	↓	↓	↓	↓	↓			
3. WP-45-Pit-4-2	1445	↓		X				4		↓	↓	↓	↓	↓	↓		Do Lab QC	
4. WP-45-Pit-4-3	1500	↓		X				2		↓	↓	↓	↓	↓	↓			
5. WP-45-Pit-4-4	1450	↓		X				2		↓	↓	↓	↓	↓	↓			
6. WP-45-Pit-5-1	1520	↓	X					8		↓	↓	↓	↓	↓	↓			
7. WP-45-Pit-5-2	1520	↓		X				[illegible]		↓	↓	↓	↓	↓	↓			
8. WP-45-Pit-5-3	1535	↓		X				2		↓	↓	↓	↓	↓	↓			
9. WP-45-Pit-7-1	1555	↓	X					8		↓	↓	↓	↓	↓	↓			
10. WP-45-Pit-7-2	1600	↓		X				2		↓	↓	↓	↓	↓	↓			
11. WP-45-Pit-7-3	1610	↓		X				2		↓	↓	↓	↓	↓	↓			
12. WP-45-BSW-1	1625	↓	X					16		↓	↓	↓	↓	↓	↓		Do Lab QC	
13. WP-45-BSW-2	1610	↓	X					[illegible]		↓	↓	↓	↓	↓	↓			

Requested Turnaround

GSAI Group:

Special Detection Limits: 7 ... 72

QC Package: (check one)
- ☐ CLP ☐ Site Specific
- ☐ Tier 1 ☐ Tier 2 ☐ QC Summary

6 Remarks:

7 Relinquished by Sampler: (Signature)	Date	Time:	Received by: (Signature)	Date	Time:
[illegible]	[illegible]	[illegible]			
Relinquished by: (Signature)	Date	Time:	Received by: (Signature)	Date	Time:
Relinquished by: (Signature)	Date	Time:	Received by Laboratory: (Signature)	Date	Time:

ATTACHMENT H

TABLE 3-1

SUMMARY OF DETECTED CONSTITUENTS FOR SOIL SAMPLES
LOCATION 3, CARLSBAD, NEW MEXICO

Detected Constituent	WP-45-PIT-4-2	WP-45-PIT-4-3	WP-45-PIT-4-4	WP-45-PIT-5-2	WP-45-PIT-5-3	WP-45-PIT-7-2	WP-45-PIT-7-3
HSL Metals (SW-846 Methods 3051/6010B/7470A)							
Aluminum	3,900	1,450	1,450	3,840	1,780	3,620	4,770
Antimony	< 0.54	2.0 T	0.94 T	< 0.63	< 0.67	1.7 T	2.0 T
Arsenic	2.7	16.3	8.2	2.7	5.5	8.9	12.1
Barium	322	1,430	632	477	239	2,570	990
Beryllium	< 0.02	< 0.02	< 0.02	< 0.02	< 0.03	0.12 T	0.31 T
Cadmium	0.19 T	< 0.04	0.06 T	0.19 T	0.25 T	< 0.04	< 0.04
Calcium	39,000	35,800	124,000	109,000	112,000	47,100	25,700
Chromium	6.4	34.0	15.8	4.3	6.3	24.0	28.6
Cobalt	1.8 T	3.4 T	2.8 T	2.4 T	1.1 T	4.5 T	4.3 T
Copper	6.9	121	60.7	< 0.33	21.0	121	142
Iron	5,350	21,800	12,300	3,800	5,540	24,600	27,200
Lead	43.6	94.6	88.2	7.1	22.8	195	232
Magnesium	1,720	2,010	2,160	3,280	6,560	3,180	3,060
Manganese	87.5	158	83.5	156	66.0	197	151
Mercury	< 0.05	1.7	0.89	0.1 T	0.48	1.3	1.5
Nickel	5.9	38.4	20.3	5.1	8.3	26.8	33.2
Potassium	1,540	855	1,150	2,050	1,620	1,490	1,940
Sodium	1,760	3,680	3,450	8,940	9,890	5,150	10,900
Vanadium	11.2	9.8	7.0	14.9	12.0	12.2	17.4
Zinc	37.5	546	213	17.9	70.9	226	359
Selenium	< 0.86	< 0.97	< 0.9	< 1.0	1.3 T	< 1.1	< 0.99

TABLE 3-1 (Continued)

SUMMARY OF DETECTED CONSTITUENTS FOR SOIL SAMPLES
LOCATION 3, CARLSBAD, NEW MEXICO

Detected Constituent	WP-45-PIT-4-2	WP-45-PIT-4-3	WP-45-PIT-4-4	WP-45-PIT-5-2	WP-45-PIT-5-3	WP-45-PIT-7-2	WP-45-PIT-7-3
Total VOCs (SW-846 Method 8260B)							
Benzene	< 0.66	0.28 V	< 0.68	< 0.77	2.8	< 0.82	3.2 V
Carbon disulfide	< 0.66	0.36 V	< 0.68	< 0.77	0.97	0.23 V	< 3.8
Ethylbenzene	< 0.66	5.8	0.24 V	0.25 V	8.8	0.36 V	24.0
Methylene chloride	0.250 VB	0.27 VB	0.53 VB	0.32 VB	< 0.82	0.45 VB	1.7 VB
Toluene	< 0.66	3.3	< 0.68	0.34 V	12.0	1.1	7.1
Xylene (total)	< 1.96	2.45	0.14 V	0.96 V	21.7	21.1	56.0
Total SVOCs (SW-846 Method 8270C)							
Chrysene	5.1 VD	30.0 VD	15.0 VD	1.6 VD	7.6 VD	2.1 VD	21.0 VD
Dibenzofuran	< 17.0	48.0 VD	< 110	1.6 VD	6.5 VD	5.3 VD	16.0 VD
Fluorene	< 17.0	44.0 VD	< 110	1.6 VD	6.0 VD	5.5 VD	20.0 VD
2-Methylnapthalene	2.4 VD	200 D	< 110	4.5 VD	17.0 VD	22.0 D	72.0 VD
Naphthalene	< 17.0	59.0 VD	< 110	1.3 VD	3.7 VD	6.5 VD	22.0 VD
Phenanthrene	16.0 VD	100 VD	40.0 VD	13.0 D	53.0 D	25.0 D	77.0 VD
Pyrene	3.6 VD	19.0 VD	< 110	1.2 VD	5.3 VD	2.5 VD	<120
Pesticides (SW-846 Methods 8081A/8141)							
None Detected							
Polychlorinated Biphenyls (SW-846 Method 8082)							
None Detected							
Herbicides (SW-846 Method 8151)							
Dalapon	0.74	< 7.4	< 0.55	< 0.12	< 0.66	< 3.3	<0.6

TABLE 3-1 (Continued)

SUMMARY OF DETECTED CONSTITUENTS FOR SOIL SAMPLES
LOCATION 3, CARLSBAD, NEW MEXICO

Notes:

All concentrations are reported in units of milligrams per kilogram (mg/kg).

Constituents reported in this table include those detected in at least one sample at a concentration greater than the reporting limit.

B	This flag is used when the analyte is found in the associated blank as well as in the sample
D	This flag identifies all compounds indentified in an analysis at a secondary dilution factor
HSL	Hazardous Substance List
SW-846	U.S. EPA (1996), Test Methods for Evaluating Solid Waste: Update III, third edition, Washington, D.C.
SVOC	Semivolatile organic compound
T	The reported value is less than the contract required detection limit but greater than the instrument detection limit
V	Result is less than the contract required quantitation limit but greater than zero
VOC	Volatile organic compound

TABLE 3-2

SUMMARY OF DETECTED CONSTITUENTS IN WATER SAMPLES
LOCATION 3, CARLSBAD, NEW MEXICO

Detected Constituent	WP-45-FB	WP-45-PIT-4-1	WP-45-PIT-5-1	WP-45-PIT-7-1	WP-45-BSW-1	WP-45-BSW-2
HSL Metals (SW-846 Methods 3051/6010B/7470A)						
Aluminum	< 0.0382	0.198 T	0.326	0.0872 T	< 0.0382	0.872
Arsenic	< 0.0037	0.138	0.0238	0.0998	0.222	0.218
Barium	0.0025 T	3.6	0.454	1.2	1.84	2.4
Beryllium	< 0.00022	< 0.00022	< 0.00022	0.00048 T	0.00091 T	0.00071 T
Cadmium	< 0.00033	0.0017 T	0.0011 T	< 0.0006 T	0.0021 T	0.0031 T
Calcium	0.402 T	772	3,630	1,800	2,720	< 0.0088
Chromium	< 0.0021	0.0431	0.0529	0.0217	0.0556	0.0637
Iron	0.0314 T	0.217	2.01	0.192	1.23	12.5
Lead	< 0.0047	< 0.0047	0.0134	< 0.0047	0.0138	0.027
Magnesium	0.176 T	484	1,610	802	4,010	< 0.0376
Manganese	0.0012 T	1.5	1.17	2.4	3.23	3.3
Mercury	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.00036
Nickel	< 0.0017	0.0301 T	0.0049 T	0.015 T	0.0172 T	0.022 T
Potassium	< 0.08	458	973	982	1,820	1,780
Selenium	< 0.0091	0.0504	0.0933	0.0389	0.175	0.164
Silver	< 0.0014	0.0019 T	0.005 T	0.0021 T	0.0034 T	< 0.0014
Sodium	0.4 T	9,220	45,100	26,500	35,200	36,600
Vanadium	0.001	0.0085 T	< 0.0045 T	0.021 T	0.0045 T	< 0.008 T
Zinc	0.0112 T	0.0389	< 0.0017	< 0.0017	< 0.0017	< 0.100

TABLE 3-2 (Continued)

SUMMARY OF DETECTED CONSTITUENTS FOR WATER SAMPLES LOCATION 3, CARLSBAD, NEW MEXICO

Detected Constituent	WP-45-FB	WP-45-PIT-4-1	WP-45-PIT-5-1	WP-45-PIT-7-1	WP-45-BSW-1	WP-45-BSW-2
Total VOCs (SW-846 Method 8260B)						
Acetone	< 0.01	< 0.1	4.5 D	0.017	6.7 D	6.9 D
Benzene	< 0.005	1.2	1.7	0.42	0.64	0.67
2-Butanone	< 0.01	< 0.1	0.078 V	0.005 V	0.32	0.36
Ethylbenzene	< 0.005	0.25	0.29	0.12	0.14	0.17
2-Hexanone	< 0.01	0.015 V	< 0.1	< 0.01	< 0.1	< 0.1
Methylene chloride	0.001 VB	< 0.05	0.016 V	0.002 VB	0.018 VB	0.017 VB
4-Methyl-2-pentanone	< 0.01	0.03 V	0.028 V	0.017	0.031 V	0.03 V
Toluene	< 0.005	1.0	1.4	0.007	0.18	0.2
Xylene (total)	< 0.015	0.5	0.59	0.14	0.36	0.45
Total SVOCs (SW-846 Method 8270C)						
Acenaphthene	< 0.02	< 0.05	0.0032 V	< 0.01	< 0.01	< 0.01
Chrysene	< 0.02	0.011 V	< 0.01	< 0.01	< 0.01	0.0031 V
Dibenzofuran	< 0.02	0.028 V	0.0052 V	0.002 V	0.003 V	0.0068 V
Diethylphthalate	< 0.02	0.0056 V	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dimethylphenol	< 0.02	0.21	0.096	0.062	0.059	0.043
2,4-Dinitrophenol	< 0.10	< 0.25	< 0.05	< 0.05	0.073	< 0.05
Fluorene	< 0.02	0.029 V	0.0065 V	< 0.01	0.0025 V	0.007 V
2-Methylnapthalene	< 0.02	0.24	0.055	0.015	0.049	0.087
2-Methylphenol	< 0.02	0.14	0.15	0.045	0.052	0.046
4-Methylphenol	< 0.02	0.14	0.15	0.015	0.046	0.044
Naphthalene	< 0.02	0.13	0.044	0.017	0.044	0.05

TABLE 3-2 (Continued)

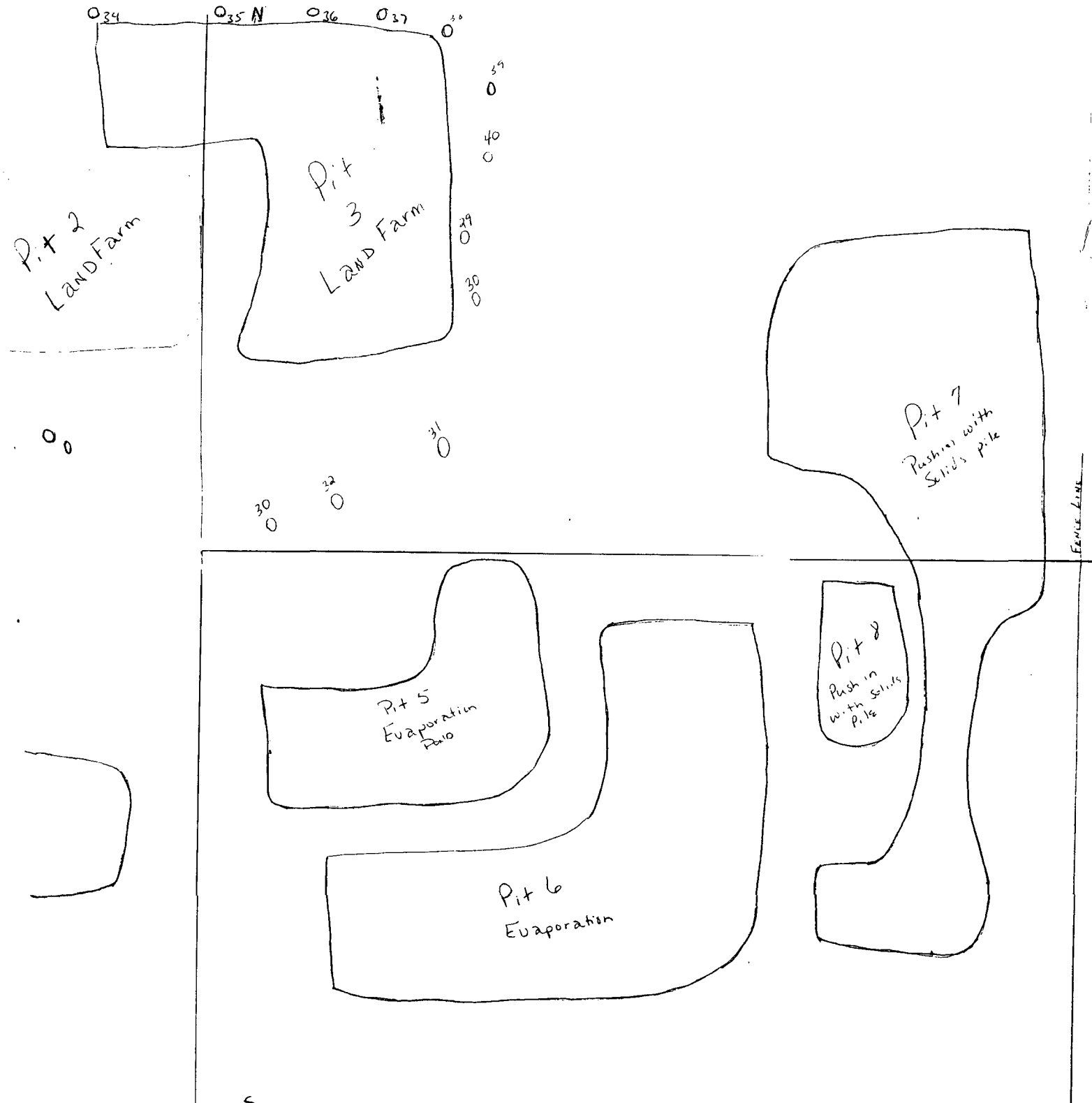
SUMMARY OF DETECTED CONSTITUENTS FOR WATER SAMPLES
LOCATION 3, CARLSBAD, NEW MEXICO

Detected Constituent	WP-45-FB	WP-45-PIT-4-1	WP-45-PIT-5-1	WP-45-PIT-7-1	WP-45-BSW-1	WP-45-BSW-2
Phenanthrene	< 0.02	0.06	0.011	0.0021 V	0.0093 V	0.017
Phenol	< 0.02	< 0.05	0.24	< 0.01	0.089	0.076
Pesticides (SW-846 Methods 8081A/8141)						
None Detected						
Polychlorinated Biphenyls (SW-846 Method 8082)						
None Detected						
Herbicides (SW-846 Method 8151)						
None Detected						

Notes:

All concentrations are reported in units of milligrams per liter (mg/L).
Constituents reported in this table include those detected in at least one sample at a concentration greater than the reporting limit.

B This flag is used when the analyte is found in the associated blank as well as in the sample
D This flag identifies all compounds indentified in an analysis at a secondary dilution factor
HSL Hazardous Substance List
SW-846 U.S. EPA (1996), Test Methods for Evaluating Solid Waste: Update III, third edition, Washington, D.C.
SVOC Semivolatile organic compound
T The reported value is less than the contract required detection limit but greater than the instrument detection limit
V Result is less than the contract required quantitation limit but greater than zero
VOC Volatile organic compound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O35 N
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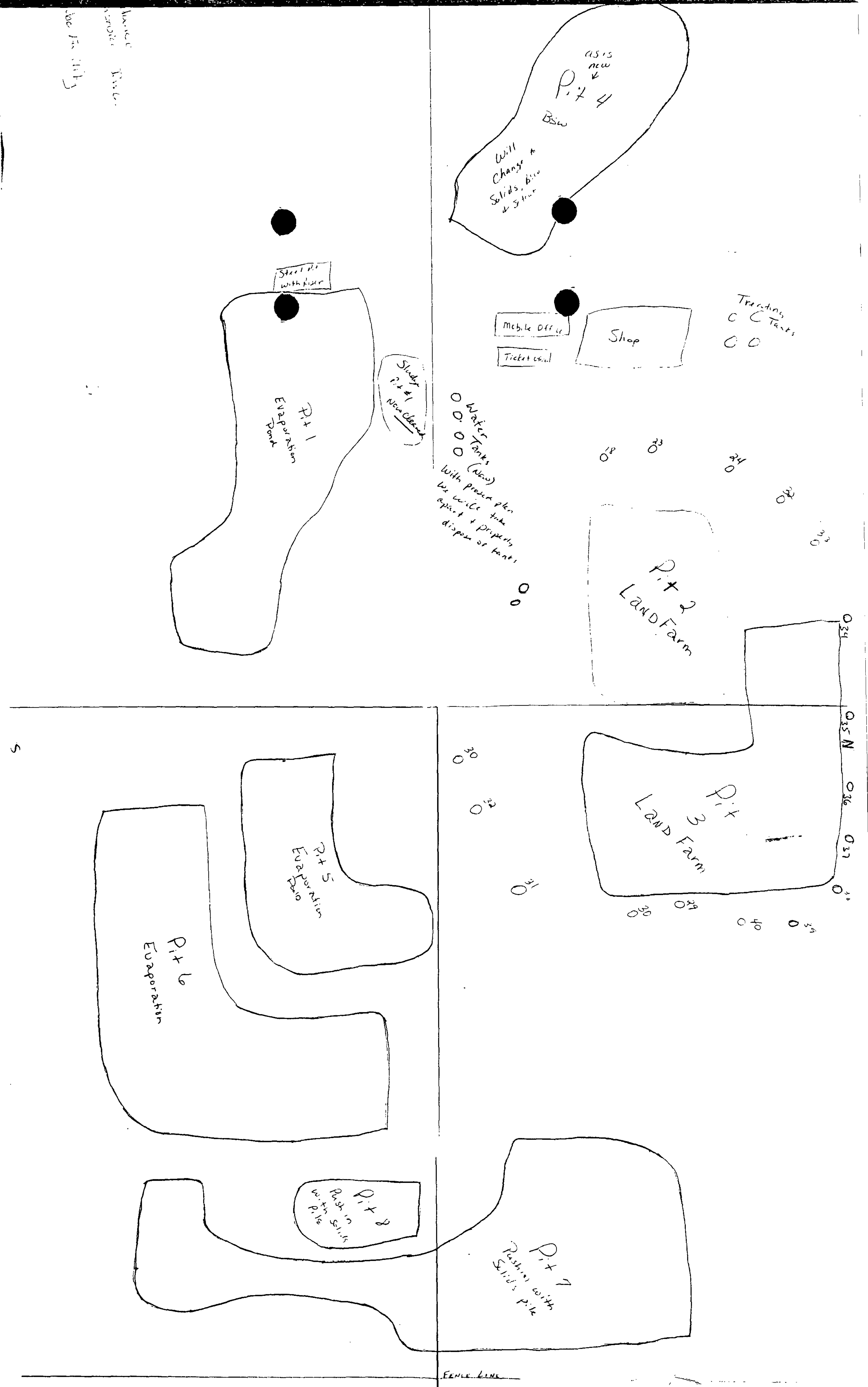
Pit 2
LandFarm
Pit
3
LAND Farm
Pit 7
Pushin with
Solids pile
Pit 5
Evaporation
Pond
Pit 8
Push in
with solids
pile
Pit 6
Evaporation
FENCE LINE



as is new
Pit 4
BSW
Steel Pit with Riser
Mobile Office
Shop
Treating Tanks
Sludge Pit #1 Now Cleaned
Pit 1 Evaporation Pond
Water Tanks (New)
With proper plan we will take apart & properly dispose of tanks
Pit 2 LandFarm
N
Pit 3 Land Farm
Pit 5 Evaporation
Pit 6 Evaporation
Pit 8 Push in with Solids Pile
Pit 7 Pushing with Solids pile
FENCE LINE